

M M W R

MORBIDITY AND MORTALITY WEEKLY REPORT

- 69 Public Opinion About Public Health — California and the United States, 1996
- 73 State-Specific Prevalence of Lapses in Health-Care-Insurance Coverage — United States, 1995
- 77 Adult Blood Lead Epidemiology and Surveillance — United States, Third Quarter, 1997

Public Opinion About Public Health — California and the United States, 1996

Despite widespread belief that public support is critical to the success of public health programs and agencies, systematic efforts to measure public opinion about public health have been limited. This report summarizes surveys conducted by two organizations—one a public policy center in California, the other a national opinion polling firm—to measure support for public health activities. The findings indicate widespread support for community-oriented disease-prevention and health-promotion activities.

California Survey

From September 30 through November 5, 1996, the Field Institute of San Francisco (with consultation by Louis Harris and Associates, Inc.) conducted a random-digit-dialed telephone survey of California residents aged ≥ 18 years; the survey was commissioned by the nonprofit California Center for Health Improvement and was funded by The California Wellness Foundation (1). A representative sample of 4803 persons was interviewed. The standard error associated with the results of this survey was $\pm 2\%$ at the 95% confidence level.

The percentage of respondents who reported that selected public health services were "top priority" ranged from 29% (for collecting community health data) to 84% (for ensuring safe drinking water). The percentage who reported delivery of these services as "very effective" ranged from 18% (for providing community education and counseling services about improving health) to 37% (for minimizing the spread of disease carried by insects or animals) (Table 1). Selected local and state fees or tax increases were supported by substantial proportions of respondents if funds were needed to pay for what the survey instrument termed as "adequate programs" (Table 2). Most respondents preferred that funds for public health services be raised at the state level instead of at the local level (Table 2). The sources of revenue for those services that were most supported by respondents were increases in state taxes on alcoholic beverages and tobacco. Most respondents opposed state surtaxes on health insurance premiums (72%), local residential property taxes (64%), and local sales taxes (57%). Respondents supported the existing state requirements that nonprofit health-care providers fund community health programs (84%) and that nonprofit health-care providers that convert to for-profit status be required to dedicate funds to

*Public Opinion About Public Health — Continued***TABLE 1. Percentage of survey respondents who reported that selected public health services were "top priority," and percentage who reported delivery of these services as "very effective" — California, 1996***

Public health service	% Respondents	
	Top priority	Very effective
Ensuring safe drinking water	84	34
Ensuring that foods are free from contamination (e.g., through restaurant and produce inspections)	77	33
Protecting the public from exposure to toxic chemicals and other hazardous materials (e.g., monitoring the disposal of industrial and medical wastes and after oil spills)	75	29
Protecting the public from the spread of communicable diseases (e.g., AIDS, hepatitis, and tuberculosis)	74	22
Helping treat disease and injury after natural disasters (e.g., earthquakes, wildfires, and floods)	65	30
Providing community education and counseling services about improving health (e.g., through nutrition education programs, alcohol- and drug-abuse programs, and tobacco prevention programs)	53	18
Minimizing the spread of disease carried by insects or animals (e.g., rabies)	49	37
Collecting community health data (e.g., registering births, determining causes of deaths, and monitoring health trends)	29	19

*Results of a random-digit-dialed telephone survey of California residents aged ≥ 18 years ($n=4803$ respondents) (1). The survey was conducted by the Field Institute of San Francisco, with consultation by Louis Harris and Associates, Inc.; the survey was commissioned by the nonprofit California Center for Health Improvement and was funded by The California Wellness Foundation. The standard error was $\pm 2\%$ at the 95% confidence level.

promote health (82%). In addition, most respondents indicated support for a statewide initiative for a 63¢ per pack increase in cigarette tax (i.e., 72% strongly or somewhat favored the increase).

National Survey

During December 12–16, 1996, Louis Harris and Associates, Inc., conducted a national random-digit-dialed telephone survey of 1004 U.S. residents aged ≥ 18 years (2). This survey was conducted for the Harris Poll column, which is syndicated to the media but is not commissioned by any one client. The standard error associated with the survey was $\pm 3\%$ at the 95% confidence level. The response rate was 62%.

Respondents were asked to rank the importance of eight services "to improve the health of the public" on a five-point scale (i.e., very important, somewhat important, not very important, not at all important, or did not know). The percentage of respondents who rated specific public health services as very important ranged from

*Public Opinion About Public Health — Continued***TABLE 2. Preferred sources of revenue for improving community health promotion and disease and injury prevention programs and environmental health services, by percentage of survey respondents — California, 1996***

Source of revenue	% Respondents		
	Favor	Oppose	Did not know
Increasing state taxes on tobacco products	81	18	1
Increasing state taxes on beer, wine, and other alcoholic beverages	78	21	1
Expanding tax deductions for contributions to charities and other nonprofit organizations	72	24	4
Increasing state income taxes for persons earning >\$200,000 per year	68	29	2
Increasing city developer fees on builders of new homes	59	38	3
Increasing local taxes on business property	53	43	4
Increasing local sales taxes	41	57	2
Increasing local taxes on residential property	33	64	3
Charging a surtax on health insurance premiums paid by businesses and persons	24	72	4

*Results of a random-digit-dialed telephone survey of California residents aged ≥ 18 years ($n=4803$ respondents) (1). The survey was conducted by the Field Institute of San Francisco, with consultation by Louis Harris and Associates, Inc.; the survey was commissioned by the nonprofit California Center for Health Improvement and was funded by The California Wellness Foundation. The standard error was $\pm 2\%$ at the 95% confidence level.

56% (for helping persons cope with stress) to 93% (for preventing the spread of infectious diseases) (Table 3).

Respondents also were asked "Who do you think should be mainly responsible for the performance of prevention rather than the treatment of disease." Most (57%) respondents indicated that government should be responsible for this service; and 40%, that "someone else" should be responsible. Of those persons who responded that government should provide this service, 53% stated that the federal government should do so; 32%, the state government; and 13%, city and local governments.

When asked the open-ended question, "What do the words 'public health' mean to you?," <4% of respondents gave answers corresponding to what the Harris Poll considered "generally...regarded as referring to public health" (i.e., health education/healthier lifestyles, prevention of infectious diseases, immunization, and medical research) (2). Eighty-three percent of respondents identified one or more of the following: general physical health, mental health, and well-being of the public; the health-care system; welfare programs; universal health care; health assurance; health insurance; and Medicaid and Medicare.

Reported by: K Bodenhorn, MPH, California Center for Health Improvement, Woodland Hills, California. H Taylor, Louis Harris and Associates, Inc., New York. Office of the Director, Public Health Practice Program Office, CDC.

Editorial Note: Opinion polling is used extensively as an adjunct to or in assessing contemporary public policy. Polling can help to clarify the perceived importance of

*Public Opinion About Public Health — Continued***TABLE 3. Percentage of survey respondents who reported that selected public health services were "very important" or "somewhat important" — United States, 1996***

Public health service	% Respondents	
	Very important	Somewhat important
Preventing the spread of infectious diseases (e.g., tuberculosis, measles, influenza, and AIDS)	93	7
Vaccinating to prevent diseases	90	9
Delivering medical care to ill patients by doctors and hospitals	85	13
Improving the quality of education and employment	83	14
Ensuring persons are not exposed to unsafe water supply, dangerous air pollution, or toxic waste	82	15
Conducting medical research on the causes and prevention of disease	82	15
Encouraging persons to live healthier lifestyles (e.g., eat well, exercise, and not to smoke)	72	24
Helping persons cope with stress from the problems of daily living and work	56	34

* Results of a random-digit-dialed telephone survey of U.S. residents aged ≥ 18 years ($n=1004$ respondents) (2) conducted by Louis Harris and Associates, Inc., for the Harris Poll column, which is syndicated to the media but is not commissioned by any one client. The standard error was $\pm 3\%$ at the 95% confidence level.

issues and the impact of advocacy campaigns and other factors on public support for, or opposition to, policies. The survey conducted in California identified 1) substantial support for public health services and 2) substantial support for taxes, if necessary, to achieve more effective public health programs and services. Although findings from the national survey were consistent with findings from the California survey about support for public health services, the national survey did not address financial concerns.

The findings in this report are subject to several limitations. First, the results of the two surveys were not directly comparable because the samples were drawn from different populations, the questions differed, and the results were reported in different formats. Second, each survey gauged public opinion at a specific point in time; therefore, the reported opinions could not be linked to contextual, secular events. Other limitations associated with survey methodology (e.g., refusals to be interviewed, wording and order of questions, and interviewer bias) also apply to the results of these two surveys.

Interest in marketing public health has been stimulated by perceived low public support for public health activities, limited financial resources, and the impact of extensive restructuring in the health-care sector. The findings in this report indicate substantial public support for public health services and suggest the need to determine the extent to which this support is consistent across jurisdictions and whether it can be translated into policy. Finally, these findings suggest the need for strengthened methods to improve the polling of opinion about public health, including clarifications of the distinction between clinical care and community- or population-oriented

Public Opinion About Public Health — Continued

disease and injury prevention, and the practical meanings of "public health," "community health," and other key terms.

References

1. California Center for Health Improvement. Spending for health: Californians speak out about priorities for health spending. Sacramento: California Center for Health Improvement, 1997.
2. Louis Harris and Associates, Inc. 'Public health': two words few people understand even though almost everyone thinks public health functions are very important. New York: Louis Harris and Associates, Inc., 1997.

State-Specific Prevalence of Lapses in Health-Care-Insurance Coverage — United States, 1995

Lack of health-care-insurance coverage has been associated with decreased use of preventive health services, delay in seeking medical care, and poor health status (1,2). In 1995, an estimated 30.5 million persons aged 18–64 years in the United States did not have health insurance (3). To determine state-specific estimates of the prevalence of persons aged 18–64 who reported either short-term (i.e., <12 months) or long-term (i.e., ≥12 months) lapses in health-care coverage, CDC analyzed data from the 1995 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results of that analysis and indicates that among adults who reported having no health insurance in 1995, most were without insurance for ≥1 year and that long-term lapses were more prevalent among men than women.

The BRFSS is a state-based, random-digit-dialed telephone survey of the U.S. non-institutionalized population aged ≥18 years. Data were obtained from all 50 states participating in the 1995 BRFSS. A total of 90,691 persons responded. Analyses were restricted to persons aged 18–64 years. Sample estimates were statistically weighted by sex, age, and race to reflect the noninstitutionalized civilian population of each state. Respondents were asked, "Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?" Persons who reported having no health-care coverage at the time of the interview were considered to be uninsured. Persons who were uninsured were asked "How long has it been since you had health care coverage?" Persons who reported having had coverage during the preceding year were classified as having short-term lapse, and those reporting not having had coverage for ≥1 year were classified as having long-term lapse.

During 1995, the prevalence of persons who reported having health-care-insurance coverage ranged from 76.5% (Louisiana) to 93.3% (Hawaii) (median: 87%) (Table 1). The prevalence of reported lapses in health-care-insurance coverage of <1 year ranged from 1.8% (New Jersey) to 9.4% (California) (median: 4.2%); lapses of ≥1 year ranged from 2.9% (Hawaii) to 17.1% (California) (median: 9.3%).

Among men, the percentage reporting having health-care-insurance coverage ranged from 75.5% (California) to 91.5% (Hawaii) (median: 84.7%) (Table 2). The percentage of men reporting lapses in health-care-insurance coverage of <1 year ranged from 2.0% (South Dakota) to 10.3% (California) (median: 4.2%), and the percentage reporting lapses of ≥1 year ranged from 3.8% (Hawaii) to 17.1% (Texas) (median: 10.6%). Among women, the percentage reporting having health-care-insurance coverage

Lapses in Health-Care Coverage — Continued

TABLE 1. Percentage of persons aged 18–64 years with reported health-care insurance coverage, by state — United States, Behavioral Risk Factor Surveillance System, 1995

State	Sample size	Insured full year		Short-term lapse*		Long-term lapse†	
		%	(95% CI)‡	%	(95% CI)	%	(95% CI)
Alabama	1378	84.5	(±2.1%)	4.6	(±1.2%)	10.9	(±1.9%)
Alaska	1380	84.0	(±2.8%)	4.1	(±1.6%)	11.8	(±2.4%)
Arizona	1425	81.5	(±2.7%)	6.8	(±1.9%)	11.8	(±2.2%)
Arkansas	1354	82.5	(±2.2%)	4.8	(±1.3%)	12.7	(±1.9%)
California	3391	77.8	(±2.3%)	9.4	(±1.7%)	12.8	(±1.8%)
Colorado	1947	83.9	(±2.2%)	4.1	(±1.2%)	12.0	(±1.9%)
Connecticut	1498	89.2	(±1.9%)	2.5	(±0.9%)	8.4	(±1.7%)
Delaware	1674	87.2	(±1.9%)	3.8	(±1.1%)	9.0	(±1.6%)
Florida	2487	81.4	(±1.8%)	6.2	(±1.1%)	12.5	(±1.5%)
Georgia	1904	88.9	(±1.7%)	3.4	(±0.9%)	7.7	(±1.4%)
Hawaii	1705	93.3	(±1.5%)	3.9	(±1.2%)	2.9	(±0.9%)
Idaho	2160	83.6	(±1.7%)	5.0	(±1.0%)	11.3	(±1.4%)
Illinois	2330	86.9	(±1.7%)	4.5	(±1.1%)	8.6	(±1.4%)
Indiana	1880	88.0	(±1.6%)	4.3	(±1.1%)	7.7	(±1.3%)
Iowa	2759	88.5	(±1.4%)	3.5	(±0.8%)	8.0	(±1.2%)
Kansas	1560	87.6	(±1.8%)	3.2	(±1.0%)	9.3	(±1.6%)
Kentucky	1749	83.8	(±1.9%)	3.5	(±0.9%)	12.7	(±1.8%)
Louisiana	1303	76.5	(±2.6%)	6.4	(±1.6%)	17.1	(±2.3%)
Maine	1008	80.4	(±2.8%)	7.7	(±2.0%)	11.8	(±2.3%)
Maryland	4172	89.5	(±1.1%)	3.8	(±0.7%)	6.7	(±0.9%)
Massachusetts	1446	87.9	(±2.0%)	3.3	(±1.2%)	8.8	(±1.7%)
Michigan	1995	90.2	(±1.4%)	3.2	(±0.9%)	6.6	(±1.2%)
Minnesota	3151	90.9	(±1.1%)	3.1	(±0.7%)	6.0	(±0.9%)
Mississippi	1217	83.9	(±2.4%)	5.1	(±1.5%)	11.0	(±2.1%)
Missouri	1244	81.9	(±2.7%)	4.4	(±1.5%)	13.7	(±2.3%)
Montana	939	81.0	(±2.7%)	3.2	(±1.2%)	15.8	(±2.6%)
Nebraska	1326	90.9	(±1.7%)	2.8	(±1.0%)	6.3	(±1.4%)
Nevada	1435	85.2	(±2.2%)	5.6	(±1.5%)	9.2	(±1.7%)
New Hampshire	1232	86.2	(±2.5%)	4.5	(±1.6%)	9.3	(±2.0%)
New Jersey	997	91.0	(±2.3%)	1.8	(±0.9%)	7.3	(±2.1%)
New Mexico	1033	79.3	(±3.0%)	6.1	(±1.6%)	14.6	(±2.7%)
New York	2007	86.0	(±2.0%)	3.9	(±1.0%)	10.1	(±1.7%)
North Carolina	2503	85.9	(±1.6%)	4.9	(±1.0%)	9.2	(±1.3%)
North Dakota	1359	87.7	(±1.9%)	2.9	(±0.9%)	9.4	(±1.7%)
Ohio	1045	87.2	(±2.5%)	5.5	(±1.7%)	7.4	(±2.0%)
Oklahoma	1219	82.4	(±2.5%)	3.9	(±1.3%)	13.6	(±2.3%)
Oregon	2259	84.6	(±1.7%)	4.9	(±1.1%)	10.6	(±1.5%)
Pennsylvania	2817	88.8	(±1.5%)	3.9	(±0.9%)	7.3	(±1.2%)
Rhode Island	1420	87.5	(±2.0%)	5.2	(±1.4%)	7.3	(±1.5%)
South Carolina	1609	86.8	(±1.9%)	3.8	(±1.1%)	9.4	(±1.7%)
South Dakota	1355	89.7	(±1.8%)	2.5	(±0.9%)	7.8	(±1.5%)
Tennessee	1600	87.5	(±1.9%)	6.2	(±1.4%)	6.3	(±1.4%)
Texas	1400	80.8	(±2.5%)	4.1	(±1.1%)	15.1	(±2.4%)
Utah	2357	87.5	(±1.8%)	4.9	(±1.1%)	7.7	(±1.4%)
Vermont	2001	86.3	(±1.8%)	3.3	(±0.9%)	10.5	(±1.6%)
Virginia	1509	87.7	(±1.9%)	4.6	(±1.2%)	7.7	(±1.6%)
Washington	2813	86.7	(±1.4%)	4.4	(±0.9%)	8.9	(±1.2%)
West Virginia	1809	80.8	(±2.1%)	4.6	(±1.1%)	14.6	(±1.8%)
Wisconsin	1787	91.2	(±1.8%)	3.4	(±1.3%)	5.4	(±1.3%)
Wyoming	1978	81.7	(±1.9%)	5.5	(±1.2%)	12.8	(±1.7%)
Range		76.5–93.3		1.8–9.4		2.9–17.1	
Median		86.5		4.2		9.3	

* Lacked insurance for <12 months.

† Lacked insurance for ≥12 months.

‡ Confidence interval.

Lapses in Health-Care Coverage — Continued

TABLE 2. Percentage of persons aged 18–64 years who reported lapses in health-care-insurance coverage, by sex and state — United States, Behavioral Risk Factor Surveillance System, 1995

State	Short-term lapse*				Long-term lapse†			
	Men		Women		Men		Women	
	%	(95% CI)‡	%	(95% CI)	%	(95% CI)	%	(95% CI)
Alabama	3.7	(±1.8%)	5.4	(±1.6%)	11.8	(±3.0%)	10.2	(±2.2%)
Alaska	5.6	(±2.8%)	2.5	(±1.5%)	13.8	(±3.7%)	9.7	(±3.0%)
Arizona	5.8	(±2.7%)	7.8	(±2.3%)	13.1	(±3.6%)	10.4	(±2.6%)
Arkansas	4.9	(±1.9%)	4.8	(±1.5%)	11.1	(±2.8%)	14.3	(±2.7%)
California	10.3	(±2.8%)	8.5	(±1.8%)	14.2	(±2.5%)	11.3	(±2.7%)
Colorado	4.4	(±1.8%)	3.9	(±1.6%)	13.6	(±3.0%)	10.4	(±2.4%)
Connecticut	2.5	(±1.6%)	2.5	(±1.0%)	13.0	(±3.1%)	3.8	(±1.3%)
Delaware	3.5	(±1.7%)	4.1	(±1.3%)	9.5	(±2.6%)	8.5	(±2.0%)
Florida	6.2	(±1.7%)	6.1	(±1.4%)	13.2	(±2.4%)	11.8	(±1.9%)
Georgia	2.3	(±1.1%)	4.5	(±1.5%)	9.0	(±2.3%)	6.4	(±1.7%)
Hawaii	4.7	(±1.9%)	3.0	(±1.3%)	3.8	(±1.5%)	2.0	(±1.0%)
Idaho	3.8	(±1.4%)	6.3	(±1.5%)	11.6	(±2.1%)	11.1	(±1.8%)
Illinois	4.7	(±1.6%)	4.2	(±1.2%)	9.2	(±2.2%)	8.0	(±1.8%)
Indiana	4.2	(±1.6%)	4.4	(±1.4%)	7.6	(±2.0%)	7.8	(±1.8%)
Iowa	3.0	(±1.1%)	4.0	(±1.1%)	10.0	(±1.9%)	6.0	(±1.3%)
Kansas	3.7	(±1.6%)	2.7	(±1.1%)	10.4	(±2.5%)	8.1	(±2.1%)
Kentucky	3.3	(±1.4%)	3.6	(±1.2%)	12.1	(±2.8%)	13.3	(±2.3%)
Louisiana	5.2	(±2.2%)	7.5	(±2.2%)	16.3	(±3.6%)	17.9	(±2.9%)
Maine	9.5	(±3.5%)	6.0	(±2.2%)	13.5	(±3.6%)	10.3	(±2.9%)
Maryland	3.3	(±1.0%)	4.2	(±1.0%)	8.1	(±1.5%)	5.4	(±1.0%)
Massachusetts	3.8	(±1.8%)	2.9	(±1.5%)	9.2	(±2.4%)	8.4	(±2.3%)
Michigan	3.5	(±1.4%)	2.9	(±1.1%)	7.0	(±1.8%)	6.1	(±1.6%)
Minnesota	3.0	(±1.0%)	3.2	(±0.9%)	7.3	(±1.5%)	4.7	(±1.1%)
Mississippi	5.0	(±2.3%)	5.2	(±1.9%)	12.7	(±3.3%)	9.5	(±2.6%)
Missouri	5.5	(±2.5%)	3.4	(±1.7%)	12.3	(±3.2%)	15.0	(±3.2%)
Montana	2.9	(±1.7%)	3.5	(±1.7%)	16.9	(±4.0%)	14.7	(±3.2%)
Nebraska	3.1	(±1.6%)	2.5	(±1.3%)	7.4	(±2.3%)	5.2	(±1.6%)
Nevada	4.6	(±2.0%)	6.8	(±2.1%)	9.4	(±2.5%)	8.9	(±2.2%)
New Hampshire	5.5	(±2.5%)	3.5	(±1.7%)	10.1	(±3.1%)	8.5	(±2.6%)
New Jersey	2.1	(±1.5%)	1.6	(±1.1%)	7.2	(±3.6%)	7.4	(±2.4%)
New Mexico	5.0	(±2.3%)	7.1	(±2.4%)	16.7	(±4.3%)	12.5	(±3.2%)
New York	3.6	(±1.5%)	4.1	(±1.3%)	12.1	(±2.8%)	8.1	(±1.9%)
North Carolina	5.8	(±1.7%)	4.1	(±1.2%)	9.0	(±1.9%)	9.4	(±1.7%)
North Dakota	3.3	(±1.4%)	2.5	(±1.1%)	11.2	(±2.7%)	7.6	(±2.2%)
Ohio	6.5	(±2.7%)	4.5	(±2.0%)	9.5	(±3.5%)	5.3	(±2.0%)
Oklahoma	4.1	(±2.0%)	3.7	(±1.8%)	14.9	(±3.4%)	12.4	(±2.9%)
Oregon	4.2	(±1.4%)	5.6	(±1.6%)	11.6	(±2.2%)	9.5	(±1.8%)
Pennsylvania	4.1	(±1.4%)	3.7	(±1.2%)	8.6	(±2.0%)	6.0	(±1.4%)
Rhode Island	6.4	(±2.3%)	4.0	(±1.7%)	9.8	(±2.6%)	5.0	(±1.7%)
South Carolina	3.6	(±1.5%)	4.0	(±1.5%)	8.0	(±2.2%)	10.7	(±2.5%)
South Dakota	2.0	(±1.1%)	3.0	(±1.5%)	8.4	(±2.3%)	7.2	(±1.9%)
Tennessee	7.3	(±2.4%)	5.2	(±1.6%)	7.5	(±2.2%)	5.1	(±1.6%)
Texas	3.8	(±1.7%)	4.5	(±1.5%)	17.1	(±3.9%)	13.1	(±2.6%)
Utah	5.2	(±1.7%)	4.5	(±1.5%)	8.5	(±2.3%)	6.8	(±1.6%)
Vermont	4.2	(±1.5%)	2.4	(±1.0%)	11.8	(±2.4%)	9.2	(±2.0%)
Virginia	3.2	(±1.6%)	6.0	(±1.6%)	6.7	(±2.3%)	8.6	(±2.1%)
Washington	4.5	(±1.3%)	4.4	(±1.2%)	10.7	(±2.0%)	7.1	(±1.4%)
West Virginia	3.9	(±1.6%)	5.2	(±1.4%)	13.5	(±2.8%)	15.7	(±2.5%)
Wisconsin	4.3	(±2.3%)	2.5	(±1.2%)	5.6	(±2.0%)	5.2	(±1.7%)
Wyoming	5.3	(±1.6%)	5.7	(±1.6%)	13.4	(±2.5%)	12.3	(±2.2%)
Range	2.0–10.3		1.6–8.5		3.8–17.1		2.0–17.9	
Median	4.2		4.1		10.6		8.6	

* Lacked insurance for <12 months.

† Lacked insurance for ≥12 months.

‡ Confidence interval.

Lapses in Health-Care Coverage — Continued

ranged from 74.6% (Louisiana) to 95.1% (Hawaii) (median: 88%). The percentage of women reporting lapses of <1 year in health-care–insurance coverage ranged from 1.6% (New Jersey) to 8.5% (California) (median: 4.1%), and the percentage reporting lapses of ≥1 year ranged from 2.0% (Wisconsin) to 17.9% (Louisiana) (median: 8.6%).

During 1995, having health-care–insurance coverage was reported more commonly by white respondents (median: 88%) than by respondents of other races/ethnicities (median: 80%), and more commonly by respondents who were employed for wages (median: 89%) than by those who were self-employed (median: 76%), homemakers (median: 82%), or unemployed (median: 61%).

Reported by the following BRFSS coordinators: J Cook, MA, Alabama; P Owen, Alaska; B Bender, Arizona; J Senner, PhD, Arkansas; B Davis, PhD, California; M Leff, MSPH, Colorado; M Adams, MPH, Connecticut; F Breukelman, Delaware; D McTague, MS, Florida; E Pledger, MPA, Georgia; A Onaka, PhD, Hawaii; C Johnson, MPH, Idaho; B Steiner, MS, Illinois; N Costello, MPA, Indiana; A Wineski, Iowa; M Perry, Kansas; K Asher, Kentucky; R Meriwether, MD, Louisiana; D Maines, Maine; A Weinstein, MA, Maryland; D Brooks, MPH, Massachusetts; H McGee, MPH, Michigan; N Salem, PhD, Minnesota; P Arbuthnot, Mississippi; T Murayi, PhD, Missouri; P Smith, Montana; S Huffman, Nebraska; E DeJan, MPH, Nevada; K Zaso, MPH, New Hampshire; G Boeselager, MS, New Jersey; W Honey, MPH, New Mexico; T Melnik, DrPH, New York; K Passaro, PhD, North Carolina; J Kaske, MPH, North Dakota; R Indian, MS, Ohio; N Hann, MPH, Oklahoma; J Grant-Worley, MS, Oregon; L Mann, Pennsylvania; J Hesser, PhD, Rhode Island; Y Gladman, South Carolina; M Gildemaster, South Dakota; D Ridings, Tennessee; K Condon, Texas; R Giles, Utah; R McIntyre, PhD, Vermont; L Redman, Virginia; K Wynkoop-Simmons, PhD, Washington; F King, West Virginia; E Cautley, MS, Wisconsin; M Futa, MA, Wyoming. Behavioral Surveillance Br, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: This report documents substantial variation in the state-specific prevalence of self-reported short-term or long-term lapses in health-care–insurance coverage. State-specific variations may reflect differences in population composition (e.g., age, race/ethnicity, and sex), socioeconomic factors (e.g., per capita income, median number of years of education, and unemployment level), and other factors. Variation in health-care–insurance coverage between male and female respondents may reflect differences in coverage from public sources (e.g., Medicaid). Women are more likely than men to be covered by Medicaid through the Aid to Families with Dependent Children program because they are more likely to be caring for children (4). Race-specific differences in health-care–insurance coverage may be related to the relative income and employment status of the two groups (5). Persons employed for wages are more likely to obtain insurance through their employer, who pays all or part of the cost of coverage. In comparison, persons who are either self-employed or unemployed must pay the total cost of coverage.

BRFSS estimates can differ from those of other surveys because of differences in methodology or wording of questions. For example, BRFSS estimates of the percentage of uninsured adults aged 18–64 years were lower than those reported from the March 1996 Current Population Survey (3). Unlike the Current Population Survey, BRFSS data are based on questions about insurance status at the time of the interview, rather than during the previous calendar year. In addition, BRFSS findings may underestimate persons without health-care–insurance coverage because BRFSS excludes households without telephones; persons without a telephone are more likely to be less educated, have a lower income, or be unemployed (6).

Based on the findings of previous studies, being uninsured may be associated with declines in health status (7); in addition, compared with insured patients, those who

Lapses in Health-Care Coverage — Continued

are hospitalized while without health-care–insurance coverage may receive fewer in-patient services and may be at increased risk for dying while hospitalized (8,9). The risks associated with lack of insurance coverage may result in substantial increases in the number of persons with chronic conditions and the cost of providing care for these persons.

Although providing health-care–insurance coverage to persons with short-term lapses is important, targeting efforts toward the long-term uninsured may be more effective because of the larger number of persons in this category and because of their potentially increased health risks. The methods and findings in this report can assist state planners in evaluating the progress of efforts to improve health-care and public health and in prioritizing programs to close insurance gaps.

References

1. Weissman JS, Stern R, Fielding SL, Epstein AM. Delayed access to health care: risk factors, reasons, and consequences. *Ann Intern Med* 1991;114:325–31.
2. CDC. Health insurance coverage and receipt of preventive health services—United States, 1993. *MMWR* 1995;44:219–25.
3. Bennefield RL. Health insurance coverage: 1995. Current population reports: household economic studies. Washington, DC: US Department of Commerce, Bureau of the Census, September 1996; report no. P60-195.
4. Weissman JS, Epstein AM. Falling through the safety net: insurance status and access to health care. Baltimore: The Johns Hopkins University Press, 1994:39–41.
5. Swartz K. The medically uninsured: special focus on workers. Washington, DC: Urban Institute Press, 1989.
6. Bureau of the Census. Statistical brief: phoneless in America. Washington, DC: US Department of Commerce, Economics and Statistics Administration, 1994.
7. Hahn B, Flood AB. No insurance, public insurance, and private insurance: do these options contribute to differences in general health? *J Health Care Poor Underserved* 1995;6:41–59.
8. Hadley J, Steinberg EP, Feder J. Comparison of uninsured and privately insured hospital patients: conditions on admission, resource use, and outcome. *JAMA* 1991;265:374–9.
9. Franks P, Clancy CM, Gold MR. Health insurance and mortality: evidence from a national cohort. *JAMA* 1993;270:737–41.

Adult Blood Lead Epidemiology and Surveillance — United States, Third Quarter, 1997

CDC's National Institute for Occupational Safety and Health (NIOSH) Adult Blood Lead Epidemiology and Surveillance program (ABLES) monitors laboratory-reported elevated blood lead levels (BLLs) among adults in the United States. During 1997, a total of 27 states reported surveillance data to ABLES.* This report presents ABLES data for the first three quarters of 1997 and compares these data with the first three quarters of 1996.

*Alabama, Arizona, California, Connecticut, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Vermont, Washington, Wisconsin, and Wyoming.

ABLES — Continued

During July–September 1996 and 1997, reports from the same 27 states of BLLs ≥ 25 $\mu\text{g/dL}$ increased 6%, from 4879 to 5193, respectively (1).[†] This quarterly increase followed an increase of 18%, from 5552 to 6564, during the first quarter and a decrease of 7%, from 6120 to 5709, during the second quarter of 1997 compared with the second quarter of 1996. These numbers reflect updated data from Alabama and Ohio for both 1997 and 1996 (2,3).[‡] The overall increase for the first three quarters of 1997 compared with the first three quarters of 1996 was 6% (Table 1); in comparison, the long-term trend had reflected a decrease during 1993–1996 (1,2,4) among adults in the United States (5). However, this 6% increase was not uniform; 14 states reported increases, nine states reported decreases, and four remained the same or did not report during both years (Figure 1).

Reported by: JP Lofgren, MD, Alabama Dept of Public Health. K Schaller, Arizona Dept of Health Svcs. S Payne, MA, Occupational Lead Poisoning Prevention Program, California Dept of Health Svcs. BC Jung, MPH, Div of Environmental Epidemiology and Occupational Health, Connecticut Dept of Public Health. R Gergely, Iowa Dept of Public Health. A Hawkes, MD, Occupational Health Program, Maine Bur of Health. E Keyvan-Larjani, MD, Lead Poisoning Prevention Program, Maryland Dept of the Environment and Mental Hygiene. R Rabin, MSPH, Div of Occupational Safety, Massachusetts Dept of Labor and Industries. M Scoblic, MN, Michigan Dept of

[†]To compare the number of reports for a constant roster of 27 states in 1997 and 1996, data for the first three quarters of 1997 for New Mexico, Rhode Island, and Wyoming were added to the previously reported totals for the first three quarters of 1996, during which these states did not report (1). In addition, data for the first three quarters of 1996 for Illinois, which discontinued reporting at the end of 1996, were subtracted from previously reported totals for the first three quarters of 1996 (1). Alabama and Ohio updated their reports for 1996, and these updated data were incorporated.

TABLE 1. Number of reports of elevated blood lead levels (BLLs) among adults, number of persons with elevated BLLs, and percentage change in number of reports — 27 states,* third quarter, 1997

Reported BLL ($\mu\text{g/dL}$)	Third quarter, 1997		Cumulative reports 1996 [‡]	Cumulative reports 1997	% Change from first three quarters, 1996 to 1997
	No. reports	No. persons [†]			
25–39	4,136	3,019	12,660	13,835	9%
40–49	784	541	2,921	2,724	–7%
50–59	191	131	652	571	–12%
≥ 60	82	57	318	336	6%
Total	5,193	3,748	16,551	17,466	6%

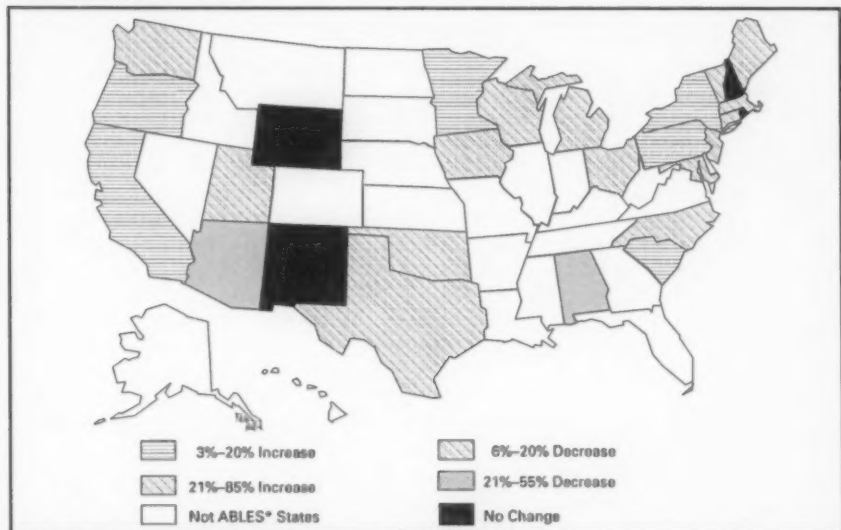
*Alabama, Arizona, California, Connecticut, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Vermont, Washington, Wisconsin, and Wyoming.

[†]An individual report for a person was categorized according to the highest reported BLL for the person during the given quarter. Persons with elevated BLLs often have more than one blood test report within a quarter and several during a year. ABLES lists persons quarterly and annually, eliminating duplicates. To allow time for amendments to data reported in the fourth quarter, analysis for yearly trends in the number of persons with elevated BLLs is reported at the time of the first-quarter report for the subsequent year, usually in July.

[‡]To compare the number of reports for a constant roster of 27 states in 1997 and 1996, data for the first three quarters of 1997 for New Mexico, Rhode Island, and Wyoming were added to the previously reported totals for the first three quarters of 1996, during which these states did not report (1). In addition, data for the first three quarters of 1996 for Illinois, which discontinued reporting at the end of 1996, were subtracted from the previously reported totals for 1996 (1). Alabama and Ohio updated their reports for 1996, and these updated data were incorporated.

ABLES — Continued

FIGURE 1. Percentage change in laboratory reports of adults with blood lead levels ≥ 25 $\mu\text{g/dL}$, by state — United States, from January–September 1996 to January–September 1997



*Adult Blood Lead Epidemiology and Surveillance.

Public Health. M Falken, PhD, Minnesota Dept of Health. L Thistle-Elliott, MEd, Div of Public Health Svcs, New Hampshire State Dept of Health and Human Svcs. B Gerwel, MD, Occupational Disease Prevention Project, New Jersey State Dept of Health. R Prophet, PhD, New Mexico Dept of Health. R Stone, PhD, New York State Dept of Health. S Randolph, MSN, North Carolina Dept of Health and Human Svcs. A Migliozi, MSN, Bur of Health Risk Reduction, Ohio Dept of Health. E Rhoades, MD, Oklahoma State Dept of Health. A Sandoval, MS, State Health Div, Oregon Dept of Human Resources. J Gostin, MS, Occupational Health Program, Div of Environmental Health, Pennsylvania Dept of Health. M Stoeckel, MPH, Rhode Island and Providence Plantations Dept of Health. A Gardner-Hillman, Div of Health Hazard Evaluations, South Carolina Dept of Health and Environmental Control. P Schnitzer, PhD, Bur of Epidemiology, Texas Dept of Health. W Ball, PhD, Bur of Epidemiology, Utah Dept of Health. L Toof, Div of Epidemiology and Health Promotion, Vermont Dept of Health. J Kaufman, MD, Washington State Dept of Labor and Industries. J Tierney, Wisconsin Dept of Health and Social Svcs. T Kietz, Wyoming Dept of Health. Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

Editorial Note: The increase in the number of reports of elevated BLLs for the first three quarters of 1997 suggests the possible ending of the long-term decline in the overall number of detected cases of elevated BLLs among adults for 1993–1996 (1,2,4). Factors related to this increase might include 1) improved efforts of the participating states and lead-using industries within them to identify lead-exposed workers; 2) improved compliance with Occupational Safety and Health Administration requirements for blood lead monitoring; 3) an increase in the size of the workforce in lead-using industries; 4) changes in reporting laws or in compliance with these laws; and/or 5) increased occupational exposures to lead. Compared with the first three quarters of

ABLES — Continued

1996, during the first three quarters of 1997, the number of reported cases of elevated BLLs increased in 14 states and decreased in nine (Figure 1). The effect of each of these potential explanations on changes in numbers of reports may have differed by state.

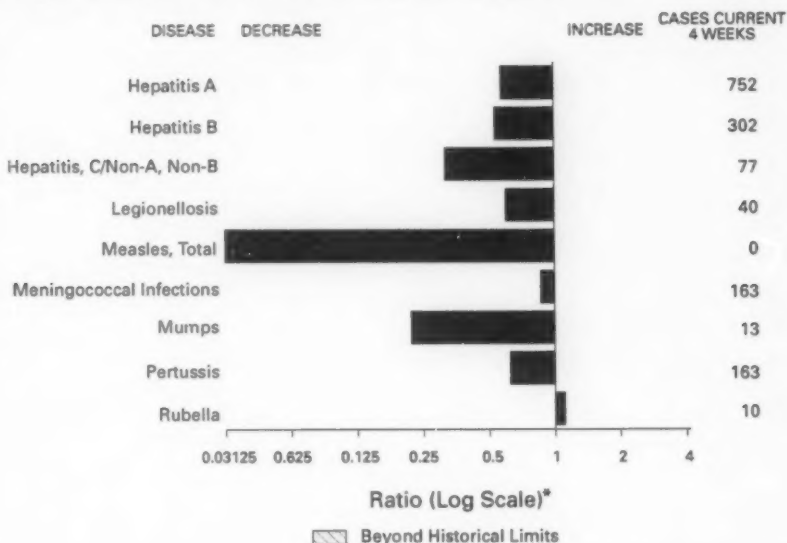
Changes in reporting laws or in compliance with these laws, rather than actual changes in workers' lead exposures, frequently are responsible for quarterly increases or decreases. For example, reports from Washington increased 70% for the first three quarters of 1997 compared with the same period in 1996. Follow-up investigation revealed that two laboratories were previously unaware of the mandatory reporting law and had begun to report elevated BLLs during 1997. Similarly, reports from Michigan increased 29% for the first three quarters of 1997 after implementation of a mandatory reporting law on October 11, 1997, and education and publicity about the new law, which began early during the year. Finally, the numbers of reports from Ohio and Alabama were revised recently as previously reported backlogged reports were re-allocated to the correct quarters for both 1997 and 1996.

An increase of 6% during the first three quarters of 1997, compared with the first three quarters of 1996, also might have been due to normal fluctuation in nationwide reporting totals, which results from changes in staffing and funding in state-based surveillance programs, interstate differences in worker BLL testing by lead-using industries, or random variation. Continued surveillance and follow-up investigation similar to that performed in Washington are required before this three-quarter increase can be confirmed as a reversal of the previous long-term decrease.

During the first three quarters of 1997, a total of 17,466 reports of BLLs ≥ 25 $\mu\text{g/dL}$ demonstrated the continuing hazard of lead exposures as an occupational health problem in the United States. NIOSH is seeking to enhance surveillance for this preventable condition by expanding the number of states participating in ABLES, reducing variability in reporting, and distinguishing between new and recurring elevated BLLs in adults.

References

1. CDC. Adult blood lead epidemiology and surveillance—United States, third quarter, 1996. *MMWR* 1996;45:105–7.
2. CDC. Adult blood lead epidemiology and surveillance—United States, first quarter, 1997, and annual 1996. *MMWR* 1997;46:643–7.
3. CDC. Adult blood lead epidemiology and surveillance—United States, second quarter, 1997. *MMWR* 1997;46:1000–2.
4. CDC. Adult blood lead epidemiology and surveillance—United States, fourth quarter, 1996. *MMWR* 1997;46:358–67.
5. CDC. Update: blood lead levels—United States, 1991–1994. *MMWR* 1997;46:141–6.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending January 31, 1998, with historical data — United States

*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending January 31, 1998 (4th Week)

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	-
Brucellosis	2	Poliomyelitis, paralytic	-
Cholera	-	Psittacosis	1
Congenital rubella syndrome	-	Rabies, human	-
Cryptosporidiosis*	65	Rocky Mountain spotted fever (RMSF)	4
Diphtheria	-	Streptococcal disease, invasive Group A	93
Encephalitis: California*	-	Streptococcal toxic-shock syndrome*	4
eastern equine*	-	Syphilis, congenital**	-
St. Louis*	-	Tetanus	2
western equine*	-	Toxic-shock syndrome	5
Hansen Disease	3	Trichinosis	1
Hantavirus pulmonary syndrome*†	-	Typhoid fever	12
Hemolytic uremic syndrome, post-diarrheal*	-	Yellow fever	-
HIV infection, pediatric*‡	22		

-: no reported cases

*Not notifiable in all states.

† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

‡ Updated monthly to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and

§ TB Prevention (NCHSTP), last update January 15, 1998.

¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 31, 1998, and January 25, 1997 (4th Week)

Reporting Area	AIDS		Chlamydia		Escherichia coli O157:H7		Gonorrhea		Hepatitis C/NA, NB	
	Cum. 1996*	Cum. 1997	Cum. 1998	Cum. 1997	NETSS†	PHLIS‡	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
UNITED STATES	3,171	4,047	26,841	29,230	46	6	19,228	20,066	86	162
NEW ENGLAND	64	124	1,233	1,180	4	1	364	431	-	3
Maine	2	13	18	49	-	-	6	3	-	-
N.H.	-	1	47	51	-	1	9	18	-	-
Vt.	6	7	25	15	-	-	-	1	-	-
Mass.	8	61	662	552	4	-	179	176	-	-
R.I.	12	10	207	127	-	-	28	36	-	3
Conn.	39	32	274	386	-	-	142	197	-	-
MID. ATLANTIC	902	1,481	4,099	3,263	1	-	2,593	2,137	6	2
Upstate N.Y.	114	117	N	N	1	-	59	228	6	-
N.Y. City	490	1,028	2,630	2,030	-	-	1,413	1,058	-	-
N.J.	136	138	7	653	-	-	309	450	-	-
Pa.	163	198	1,462	580	N	-	812	401	-	2
E.N. CENTRAL	203	317	4,973	4,337	8	-	3,963	3,386	28	53
Ohio	32	41	1,429	1,542	4	-	917	1,126	2	3
Ind.	39	24	301	522	4	-	320	423	1	1
Ill.	102	115	1,268	765	-	-	1,206	425	-	6
Mich.	15	118	1,807	641	-	-	1,421	1,015	25	43
Wis.	15	19	168	867	N	1	99	397	-	-
W.N. CENTRAL	55	159	1,591	2,222	3	1	652	1,007	3	5
Minn.	15	17	220	486	2	-	116	184	-	-
Iowa	6	18	39	384	1	-	13	68	3	-
Mo.	19	112	739	819	-	1	268	541	-	4
N. Dak.	-	-	-	57	-	-	-	5	-	-
S. Dak.	4	-	85	46	-	-	17	9	-	-
Nebr.	9	6	11	119	-	-	1	40	-	-
Kans.	2	6	497	311	-	-	237	160	-	1
S. ATLANTIC	793	951	6,272	5,494	12	1	5,620	5,705	6	9
Del.	13	-	135	-	-	-	114	-	-	-
Md.	53	173	566	382	5	1	547	901	1	3
D.C.	63	63	N	N	-	-	289	391	-	-
Va.	39	50	683	744	N	-	547	533	1	-
W. Va.	5	-	168	280	N	-	47	82	-	-
N.C.	45	57	1,162	1,565	3	-	1,097	1,222	2	4
S.C.	59	30	1,402	591	-	-	1,093	869	-	2
Ge.	116	2	1,210	591	2	-	1,049	687	-	-
Fla.	380	576	946	1,341	2	-	837	1,020	2	-
E.S. CENTRAL	156	108	2,488	2,282	2	-	2,724	2,664	5	17
Ky.	19	22	386	447	1	-	343	335	-	-
Tenn.	52	36	971	683	-	-	975	698	5	6
Ala.	56	37	541	564	1	-	772	898	-	1
Miss.	29	13	590	588	-	1	634	733	-	10
W.S. CENTRAL	382	412	1,823	3,957	-	-	1,915	2,841	-	3
Ark.	17	18	246	167	-	-	506	327	-	-
La.	67	55	1,002	401	-	-	1,063	483	-	1
Okla.	14	32	575	361	-	-	346	320	-	-
Tex.	284	307	-	3,028	-	-	-	1,711	-	2
MOUNTAIN	88	109	963	1,412	5	2	493	500	24	24
Mont.	6	7	6	22	-	-	-	4	3	2
Idaho	3	2	33	90	2	-	-	11	5	6
Wyo.	-	1	38	37	-	-	-	3	10	9
Colo.	21	38	-	69	1	-	2	3	2	3
N. Mex.	9	4	361	321	1	-	239	127	2	3
Ariz.	33	1	362	581	N	1	76	78	1	2
Utah	13	14	153	97	1	-	156	203	-	2
Nev.	3	42	10	195	-	-	17	9	2	-
PACIFIC	528	386	3,399	5,083	11	-	904	1,385	14	46
Wash.	34	45	808	588	-	-	137	155	-	-
Oreg.	12	30	279	264	2	-	48	41	-	1
Calif.	477	300	2,089	4,068	9	-	679	1,117	14	40
Alaska	-	6	121	95	-	-	17	42	-	-
Hawaii	5	5	102	68	N	-	23	30	-	5
Guam	-	-	-	25	N	-	-	2	-	-
P.R.	88	1	U	U	-	U	-	40	2	2
V.I.	1	1	N	N	N	U	-	-	-	-
Amer. Samoa	-	-	-	-	N	U	-	-	-	-
C.N.M.I.	-	-	N	N	N	U	-	3	-	-

N: Not notifiable U: Unavailable - : no reported cases

C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update January 25, 1998.

†National Electronic Telecommunications System for Surveillance.

‡Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending January 31, 1998, and January 25, 1997 (4th Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998*	Cum. 1997	Cum. 1998
UNITED STATES	45	50	117	193	42	87	442	648	498	660	430
NEW ENGLAND	2	4	5	44	-	2	5	10	4	10	88
Maine	-	-	-	-	-	-	-	-	U	-	10
N.H.	-	2	-	1	-	1	-	-	-	-	8
Vt.	-	1	-	1	-	-	-	-	-	-	2
Mass.	2	1	5	5	-	1	5	4	2	3	29
R.I.	-	-	-	1	-	-	-	-	2	1	10
Conn.	-	-	-	36	-	-	-	6	U	6	29
MID. ATLANTIC	2	7	64	117	7	13	30	27	12	36	119
Upstate N.Y.	-	1	16	2	2	-	-	-	U	3	66
N.Y. City	-	-	-	10	3	4	3	8	U	15	U
N.J.	-	1	-	48	-	7	22	15	12	5	19
Pa.	2	5	48	57	2	2	5	4	U	13	34
E.N. CENTRAL	20	18	8	3	4	13	51	47	24	63	1
Ohio	12	12	8	2	1	1	21	16	U	32	1
Ind.	2	1	-	-	1	2	8	12	U	7	-
Ill.	-	1	-	1	-	5	18	6	24	24	-
Mich.	6	4	-	-	2	5	-	-	U	-	-
Wis.	-	-	U	U	-	-	4	13	U	-	-
W.N. CENTRAL	-	5	1	-	-	-	4	15	8	9	16
Minn.	-	-	-	-	-	-	-	5	U	7	1
Iowa	-	-	1	-	-	-	-	-	U	-	11
Mo.	-	3	-	-	-	-	2	8	8	1	1
N. Dak.	-	-	-	-	-	-	-	-	U	1	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	1	-	-	-	-	-	-	-	-	-
Kans.	-	1	-	-	-	-	2	2	U	-	3
S. ATLANTIC	11	7	32	16	16	10	170	241	32	45	186
Del.	1	1	-	1	-	1	-	-	-	-	-
Md.	4	5	31	14	9	1	27	67	2	6	53
D.C.	1	1	1	-	1	1	6	5	6	6	-
Va.	2	-	-	-	-	1	24	12	-	16	34
W. Va.	N	N	-	-	-	-	-	-	7	3	5
N.C.	-	-	-	1	1	1	45	50	18	9	39
S.C.	-	-	-	-	-	1	27	37	U	-	5
Ga.	-	-	-	-	3	2	29	49	U	-	15
Fla.	3	-	-	-	2	2	17	20	U	5	15
E.S. CENTRAL	-	2	4	9	-	1	94	150	-	41	7
Ky.	-	-	-	1	-	-	9	8	U	11	1
Tenn.	-	-	4	1	-	-	49	57	U	9	-
Ala.	-	1	-	-	-	1	23	52	U	19	6
Miss.	-	1	-	7	-	-	13	33	U	2	-
W.S. CENTRAL	-	-	-	-	-	-	57	121	-	75	17
Ark.	-	-	-	-	-	-	20	13	-	-	1
La.	-	-	-	-	-	-	31	38	-	-	-
Okl.	-	-	-	-	-	-	6	13	U	5	16
Tex.	-	-	-	-	-	-	-	57	U	70	-
MOUNTAIN	5	6	-	-	4	6	11	10	10	10	5
Mont.	-	-	-	-	-	1	-	-	-	-	2
Idaho	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	1	3
Colo.	2	2	-	-	2	3	1	-	U	3	-
N. Mex.	1	-	-	-	2	-	-	-	U	-	-
Ariz.	-	1	-	-	-	-	8	9	10	4	-
Utah	2	2	-	-	-	-	2	-	U	-	-
Nev.	-	1	-	-	-	2	-	1	U	2	-
PACIFIC	5	1	3	4	11	42	20	27	408	371	11
Wash.	-	-	-	-	-	-	1	-	U	19	-
Oreg.	-	-	-	2	2	2	-	1	U	7	-
Calif.	5	1	3	2	9	40	18	26	402	320	11
Alaska	-	-	-	-	-	-	-	-	2	7	-
Hawaii	-	-	-	-	-	-	-	-	4	18	-
Guam	-	-	-	-	-	-	-	-	-	3	-
P.R.	-	-	-	-	-	2	10	11	-	-	2
V.I.	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-

N: Not notifiable U: Unavailable -: no reported cases

*Additional information about areas displaying "U" (e.g., Tuberculosis) can be found in Notices to Readers, MMWR Vol. 47, No. 2, p. 39.

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 31, 1998, and January 25, 1997 (4th Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)				Total	
	Cum. 1998*	Cum. 1997	A		B		Indigenous		Imported†		Cum. 1998	Cum. 1997
			Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998		
UNITED STATES	73	83	922	1,446	333	473	-	-	-	-	-	7
NEW ENGLAND	5	9	22	36	1	13	-	-	-	-	-	-
Maine	-	2	5	2	-	1	-	-	-	-	-	-
N.H.	1	2	1	1	1	-	-	-	-	-	-	-
Vt.	-	-	1	2	-	-	-	-	-	-	-	-
Mass.	4	5	2	14	-	10	-	-	-	-	-	-
R.I.	-	-	-	1	-	-	-	-	-	-	-	-
Conn.	-	-	13	16	-	2	-	-	-	-	-	-
MID. ATLANTIC	7	13	38	138	38	76	-	-	-	-	-	2
Upstate N.Y.	2	-	20	-	15	1	-	-	-	-	-	1
N.Y. City	1	5	10	67	10	31	-	-	-	-	-	-
N.J.	4	5	1	28	-	21	-	-	-	-	-	1
Pa.	-	3	7	43	13	23	-	-	-	-	-	-
E.N. CENTRAL	7	12	176	203	59	104	-	-	-	-	-	1
Ohio	6	8	42	40	8	5	-	-	-	-	-	-
Ind.	1	-	26	25	4	15	-	-	-	-	-	-
Ill.	-	4	-	73	-	31	-	-	-	-	-	-
Mich.	-	-	102	41	46	49	-	-	-	-	-	1
Wis.	-	-	6	24	1	4	-	-	-	-	-	-
W.N. CENTRAL	1	4	78	99	7	27	-	-	-	-	-	-
Minn.	-	2	-	1	-	-	-	-	-	-	-	-
Iowa	1	-	48	13	2	1	-	-	-	-	-	-
Mo.	-	2	30	54	4	23	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	U	-	U	-	-	-
S. Dak.	-	-	-	1	1	-	-	-	-	-	-	-
Nebr.	-	-	-	4	-	1	-	-	-	-	-	-
Kans.	-	-	-	26	-	2	-	-	-	-	-	-
S. ATLANTIC	21	13	74	68	40	27	-	-	-	-	-	-
Del.	-	-	-	4	-	1	-	-	-	-	-	-
Md.	7	5	25	34	9	14	-	-	-	-	-	-
D.C.	-	-	2	1	1	1	-	-	-	-	-	-
Va.	2	1	10	12	3	-	-	-	-	-	-	-
W. Va.	1	1	-	1	-	1	-	-	-	-	-	-
N.C.	1	4	6	7	16	8	-	-	-	-	-	-
S.C.	-	-	4	2	-	2	-	-	-	-	-	-
Ga.	6	1	10	1	5	-	-	-	-	-	-	-
Fla.	4	1	17	6	6	-	-	-	-	-	-	-
E.S. CENTRAL	2	7	22	42	27	38	-	-	-	-	-	1
Ky.	-	-	-	4	-	-	-	-	-	-	-	-
Tenn.	2	2	14	17	20	28	-	-	-	-	-	-
Ala.	-	5	8	7	7	1	-	-	-	-	-	1
Miss.	-	-	-	14	-	9	-	-	-	-	-	-
W.S. CENTRAL	4	2	31	68	6	3	-	-	-	-	-	-
Ark.	-	-	1	6	6	2	-	-	-	-	-	-
La.	3	-	1	-	-	-	-	-	-	-	-	-
Ola.	1	2	22	65	-	-	-	-	-	-	-	-
Tex.	-	-	7	7	-	1	-	-	-	-	-	-
MOUNTAIN	16	3	233	247	85	71	-	-	-	-	-	-
Mont.	-	-	4	6	1	-	-	-	-	-	-	-
Idaho	-	-	9	20	3	-	-	-	-	-	-	-
Wyo.	-	-	2	-	-	1	-	-	-	-	-	-
Colo.	1	1	18	43	7	20	-	-	-	-	-	-
N. Mex.	-	-	14	16	19	26	-	-	-	-	-	-
Ariz.	10	2	150	96	20	13	-	-	-	-	-	-
Utah	-	-	14	47	6	6	-	-	-	-	-	-
Nev.	5	-	22	18	9	5	-	-	-	-	-	-
PACIFIC	10	20	248	545	90	114	-	-	-	-	-	3
Wash.	-	-	6	4	1	-	-	-	-	-	-	-
Oreg.	7	5	19	49	4	12	-	-	-	-	-	-
Calif.	3	13	222	479	84	100	-	-	-	-	-	1
Alaska	-	-	-	3	1	-	-	-	-	-	-	-
Hawaii	-	2	1	10	-	2	-	-	-	-	-	2
Guam	-	-	-	-	-	1	U	-	U	-	-	-
P.R.	-	-	-	12	-	17	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	U	-	U	-	-	-
C.N.M.I.	-	1	-	-	-	3	U	-	U	-	-	-

N: Not notifiable U: Unavailable <: no reported cases

*Of 19 cases among children aged <5 years, serotype was reported for 5 and of those, 2 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 31, 1998, and January 25, 1997 (4th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	206	290	1	19	15	42	215	294	7	10	2
NEW ENGLAND	19	16	-	-	-	3	42	114	-	-	-
Maine	1	1	-	-	-	-	-	-	-	-	-
N.H.	1	2	-	-	-	-	-	4	-	-	-
Vt.	1	-	-	-	-	-	5	17	-	-	-
Mass.	9	9	-	-	-	-	7	42	-	-	-
R.I.	1	-	-	-	-	3	30	51	-	-	-
Conn.	6	4	-	-	-	-	-	-	-	-	-
MID. ATLANTIC	18	19	-	1	1	11	11	2	7	8	-
Upstate N.Y.	1	-	-	1	-	11	11	-	7	8	-
N.Y. City	3	4	-	-	-	-	-	-	-	-	-
N.J.	14	5	-	-	1	-	-	1	-	-	-
Pa.	-	10	-	-	-	-	-	1	-	-	-
E.N. CENTRAL	29	52	-	1	1	5	19	33	-	-	2
Ohio	20	23	-	1	1	4	16	18	-	-	-
Ind.	5	7	-	-	-	-	-	-	-	-	-
Ill.	-	13	-	-	-	-	-	3	-	-	-
Mich.	3	3	-	-	-	1	3	7	-	-	-
Wis.	1	6	-	-	-	-	-	5	-	-	2
W.N. CENTRAL	7	28	-	-	-	2	3	5	-	-	-
Minn.	-	2	-	-	-	2	2	-	-	-	-
Iowa	1	8	-	-	-	-	1	3	-	-	-
Mo.	4	11	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	U	-	-	U	-	-	U	-	-
S. Dak.	1	1	-	-	-	-	-	1	-	-	-
Nebr.	1	1	-	-	-	-	-	1	-	-	-
Kans.	1	5	-	-	-	-	-	-	-	-	-
S. ATLANTIC	44	43	1	8	-	1	27	11	-	1	-
Del.	-	2	-	-	-	-	-	-	-	-	-
Md.	7	4	1	2	-	1	6	10	-	-	-
D.C.	4	2	-	-	-	-	-	-	-	-	-
Va.	4	2	-	-	-	-	-	-	-	-	-
W. Va.	2	1	-	-	-	-	-	-	-	-	-
N.C.	3	8	-	3	-	-	-	-	-	-	-
S.C.	5	12	-	2	-	-	21	-	-	1	-
Ga.	16	8	-	-	-	-	-	1	-	-	-
Fla.	7	6	-	1	-	-	-	-	-	-	-
E.S. CENTRAL	7	29	-	-	4	5	9	3	-	-	-
Ky.	-	7	-	-	-	-	-	-	-	-	-
Tenn.	7	8	-	-	1	2	2	-	-	-	-
Ala.	-	9	-	-	1	3	7	1	-	-	-
Miss.	-	5	-	-	2	-	-	2	-	-	-
W.S. CENTRAL	11	4	-	2	-	2	6	1	-	1	-
Ark.	2	2	-	-	-	1	5	-	-	-	-
La.	4	-	-	-	-	-	-	-	-	-	-
Okla.	5	1	-	-	-	-	-	-	-	-	-
Tex.	-	1	-	2	-	1	1	1	-	1	-
MOUNTAIN	18	20	-	1	3	11	88	96	-	-	-
Mont.	1	1	-	-	-	1	1	-	-	-	-
Idaho	1	1	-	-	-	5	43	69	-	-	-
Wyo.	1	-	-	-	-	-	-	2	-	-	-
Colo.	6	-	-	-	1	-	7	14	-	-	-
N. Mex.	2	5	N	N	N	5	30	6	-	-	-
Ariz.	7	7	-	1	-	-	-	4	-	-	-
Utah	1	3	-	-	-	-	-	1	-	-	-
Nev.	-	3	-	-	1	-	-	-	-	-	-
PACIFIC	53	79	-	6	6	2	12	29	-	-	-
Wash.	6	7	-	-	2	2	2	1	-	-	-
Oreg.	20	25	N	N	N	-	3	2	-	-	-
Calif.	27	47	-	1	3	-	7	25	-	-	-
Alaska	-	-	-	2	-	-	-	-	-	-	-
Hawaii	-	-	-	3	3	-	-	1	-	-	-
Guam	-	-	U	-	-	U	-	-	U	-	-
P.R.	-	-	-	-	1	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending January 31, 1998 (4th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total	
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	708	518	125	42	13	10	78	S. ATLANTIC	1,233	862	231	93	24	23	85	
Boston, Mass.	197	132	34	25	6	-	24	Atlanta, Ga.	U	U	U	U	U	U	U	
Bridgeport, Conn.	45	30	12	1	1	1	1	Baltimore, Md.	286	183	56	31	8	8	18	
Cambridge, Mass.	15	14	1	-	-	-	4	Charlotte, N.C.	115	80	26	4	2	3	14	
Fall River, Mass.	36	30	5	1	-	-	-	Jacksonville, Fla.	159	124	24	7	-	4	8	
Hartford, Conn.	65	42	15	4	3	1	3	Miami, Fla.	112	69	23	15	2	3	-	
Lowell, Mass.	37	31	4	2	-	-	7	Norfolk, Va.	59	35	15	5	3	1	5	
Lynn, Mass.	12	11	-	-	-	1	-	Richmond, Va.	91	66	15	6	4	-	7	
New Bedford, Mass.	23	19	3	1	-	-	1	Savannah, Ga.	44	31	7	4	2	-	8	
New Haven, Conn.	43	30	9	2	-	2	11	St. Petersburg, Fla.	76	57	14	3	1	1	4	
Providence, R.I.	72	53	14	1	-	4	1	Tampa, Fla.	216	160	40	12	2	2	20	
Somerville, Mass.	5	4	1	-	-	-	1	Washington, D.C.	57	39	11	6	-	1	1	
Springfield, Mass.	50	34	13	2	1	-	4	Wilmington, Del.	18	18	-	-	-	-	-	
Waterbury, Conn.	32	25	6	-	1	-	4	E.S. CENTRAL	1,100	756	227	72	17	23	94	
Worcester, Mass.	76	63	8	3	1	1	15	Birmingham, Ala.	232	157	44	17	2	7	31	
MID. ATLANTIC	2,053	1,934	461	190	26	41	106	Chattanooga, Tenn.	106	77	19	8	1	1	10	
Albany, N.Y.	53	39	10	2	1	1	4	Knoxville, Tenn.	112	83	17	10	1	1	19	
Allentown, Pa.	18	17	-	1	-	-	-	Lexington, Ky.	97	66	20	6	2	3	10	
Buffalo, N.Y.	U	U	U	U	U	U	U	Memphis, Tenn.	204	149	38	11	5	1	9	
Camden, N.J.	30	18	3	6	3	-	2	Mobile, Ala.	91	62	21	5	2	1	-	
Elizabeth, N.J.	27	24	3	-	-	-	-	Montgomery, Ala.	39	25	7	4	1	2	8	
Erie, Pa.	56	45	4	5	-	2	3	Nashville, Tenn.	219	137	61	11	3	7	7	
Jersey City, N.J.	54	42	10	1	-	1	1	W.S. CENTRAL	1,644	1,111	299	140	49	45	138	
New York City, N.Y.	1,346	963	243	111	15	14	60	Austin, Tex.	105	77	19	6	2	1	8	
Newark, N.J.	44	15	14	11	2	2	3	Baton Rouge, La.	71	53	8	6	3	1	3	
Paterson, N.J.	22	13	6	2	-	1	3	Corpus Christi, Tex.	47	32	8	5	-	2	4	
Philadelphia, Pa.	499	353	101	29	3	12	28	Dallas, Tex.	244	155	48	28	7	6	9	
Pittsburgh, Pa.	52	37	10	4	-	1	6	El Paso, Tex.	40	29	8	2	1	-	1	
Reading, Pa.	48	43	5	-	-	-	6	Ft. Worth, Tex.	149	101	30	11	5	2	7	
Rochester, N.Y.	125	98	17	6	1	3	14	Houston, Tex.	368	233	79	31	8	17	37	
Schenectady, N.Y.	31	27	3	1	-	-	1	Little Rock, Ark.	85	60	18	-	3	4	4	
Scranton, Pa.	27	21	4	1	-	1	3	New Orleans, La.	84	42	5	20	14	3	-	
Syracuse, N.Y.	122	102	13	5	-	2	13	San Antonio, Tex.	267	200	42	16	4	5	35	
Trenton, N.J.	31	22	7	2	-	-	6	Shreveport, La.	81	58	14	7	-	2	11	
Utica, N.Y.	33	26	5	2	-	-	1	Tulsa, Okla.	103	71	20	8	2	2	19	
Yonkers, N.Y.	35	29	3	1	1	1	1	MOUNTAIN	1,230	905	213	69	24	19	156	
E.N. CENTRAL	2,402	1,706	432	161	50	82	166	Albuquerque, N.M.	130	96	22	7	3	2	9	
Akron, Ohio	67	55	11	-	1	-	1	Boise, Idaho	61	46	9	4	1	1	13	
Canton, Ohio	44	40	3	1	-	-	4	Colo. Springs, Colo.	70	54	10	4	2	-	10	
Chicago, Ill.	411	275	77	37	10	11	22	Denver, Colo.	137	91	29	11	3	3	16	
Cincinnati, Ohio	143	102	25	11	2	3	13	Las Vegas, Nev.	263	199	50	11	1	2	32	
Cleveland, Ohio	158	96	42	11	3	6	6	Ogden, Utah	40	34	4	2	-	-	6	
Columbus, Ohio	219	163	36	9	5	6	28	Phoenix, Ariz.	162	110	33	13	4	2	19	
Dayton, Ohio	153	116	27	6	3	2	18	Pueblo, Colo.	37	31	6	-	-	-	10	
Detroit, Mich.	233	140	48	33	8	4	5	Salt Lake City, Utah	151	111	23	7	6	4	22	
Evansville, Ind.	64	42	15	4	-	3	10	Tucson, Ariz.	179	133	27	10	4	5	19	
Fort Wayne, Ind.	74	54	12	5	2	1	4	PACIFIC	2,098	1,532	331	138	48	48	243	
Gary, Ind.	10	6	2	-	2	-	-	Berkeley, Calif.	19	14	4	1	-	-	2	
Grand Rapids, Mich.	82	64	11	5	1	1	10	Fresno, Calif.	114	84	13	12	4	1	17	
Indianapolis, Ind.	197	136	37	18	3	4	1	Glendale, Calif.	37	34	1	2	-	-	1	
Lansing, Mich.	58	44	9	4	-	1	4	Honolulu, Hawaii	84	62	16	4	-	-	3	
Milwaukee, Wis.	133	101	22	7	2	1	8	Long Beach, Calif.	116	86	20	4	1	5	32	
Peoria, Ill.	49	43	3	2	1	-	3	Los Angeles, Calif.	564	405	96	37	15	11	38	
Rockford, Ill.	65	51	10	2	2	-	8	Pasadena, Calif.	37	30	5	2	-	-	4	
South Bend, Ind.	61	45	12	1	-	3	7	Portland, Oreg.	130	93	23	6	3	5	10	
Toledo, Ohio	111	82	19	3	4	3	10	Sacramento, Calif.	190	140	31	14	1	4	29	
Youngstown, Ohio	70	52	11	3	1	3	5	San Diego, Calif.	182	130	30	15	4	3	39	
W.N. CENTRAL	1,015	756	150	56	18	27	97	San Francisco, Calif.	126	88	18	14	3	3	20	
Des Moines, Iowa	155	118	27	5	3	2	15	San Jose, Calif.	180	135	29	9	4	2	27	
Duluth, Minn.	29	24	4	1	-	-	5	Santa Cruz, Calif.	55	44	6	1	3	1	10	
Kansas City, Kans.	37	27	5	5	-	-	3	Seattle, Wash.	111	65	19	13	7	7	2	
Kansas City, Mo.	112	85	12	4	1	2	8	Spokane, Wash.	52	42	7	1	1	1	3	
Lincoln, Neb.	45	39	3	2	1	-	6	Tacoma, Wash.	101	80	13	3	2	3	6	
Minneapolis, Minn.	196	142	27	12	5	10	18	TOTAL	14,083 [†]	10,080	2,469	961	269	288	1,221	
Omaha, Neb.	114	82	19	9	4	-	8									
St. Louis, Mo.	130	91	24	7	3	5	10									
St. Paul, Minn.	107	84	14	6	-	3	20									
Wichita, Kans.	90	64	15	5	1	5	4									

U: Unavailable - : no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

‡Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

§Total includes unknown ages.

Contributors to the Production of the *MMWR* (Weekly)**Weekly Notifiable Disease Morbidity Data and 122 Cities Mortality Data**

Denise Koo, M.D., M.P.H.

State Support Team

Robert Fagan
Karl A. Brendel
Siobhan Gilchrist, M.P.H.
Harry Holden
Gerald Jones
Felicia Perry
Carol A. Worsham

CDC Operations Team

Carol M. Knowles
Deborah A. Adams
Willie J. Anderson
Christine R. Burgess
Patsy A. Hall
Myra A. Montalbano
Angela Trosclair, M.S.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to listserv@listserv.cdc.gov. The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at <http://www.cdc.gov/> or from CDC's file transfer protocol server at <ftp.cdc.gov>. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (888) 232-3228.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Director, Centers for Disease
Control and Prevention
David Satcher, M.D., Ph.D.
Deputy Director, Centers for
Disease Control and Prevention
Claire V. Broome, M.D.

Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.
Editor, *MMWR* Series
Richard A. Goodman, M.D., M.P.H.
Managing Editor, *MMWR* (weekly)
Karen L. Foster, M.A.

Writers-Editors, *MMWR* (weekly)
David C. Johnson
Teresa F. Rutledge
Lanette B. Wolcott
Desktop Publishing and
Graphics Support
Moris M. Higgins
Peter M. Jenkins

☆U.S. Government Printing Office: 1998-633-228/67055 Region IV

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Centers for Disease Control
and Prevention (CDC)
Atlanta, Georgia 30333

Official Business
Penalty for Private Use \$300
Return Service Requested

9602 93036 980204
UNIVERSITY MICROFILMS
SERIALS ACQUISITION DEPT
300 NORTH ZEEB ROAD
ANN ARBOR MI 48103-1553

0001

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-294

